Vulnerability Assessment
Data Collection Status
&
March Workgroup Charge

Goal

- *The goal of the Sea Level Rise Advisory Committee is to **assess Delaware's vulnerability** to current and future inundation problems that may be exacerbated by sea level rise and to **develop a set of recommendations** for state agencies, local governments, businesses and citizens to enable them **to adapt programs, policies, business practices and make informed decisions.***

Final Product

- A Document that:
  - ✓ Describes vulnerable resources
  - ✓ Provides detailed maps in an easy to use format
  - ✓ Describes potential adaptation strategies
  - ✓ Makes recommendations for policy, program and funding necessary to implement adaptation strategies
- A Document that will be a resource for:
  - ✓ State agencies
  - ✓ Local governments
  - ✓ Businesses
  - ✓ Citizens
- A Document that will inform implementation

Where we are

- **Vulnerability Assessment**
  - ✓ Exposure – What will be inundated and where?
  - ✓ Impact – What are the effects of inundation based on frequency/level of inundation?
- **Adaptation Capacity Assessment**
  - ✓ What are the specific adaptation options available for each exposure to SLR inundation? What are the socio-economic impacts of each option?
  - ✓ What programs, policies and funding exist to facilitate adaptation?
- **Adaptation Planning**
  - ✓ Prioritization of adaption options
  - ✓ Strategies to make improvements to policies, programs and funding to facilitate adaptation

Example Table of Contents

- Executive Summary
- Introduction and Framework
- Vulnerable Resources
  - ✓ Infrastructure
  - ✓ Natural Resources
  - ✓ Socio-Economic Resources
- Recommendations and Adaptation Strategies
- Works Cited

- Wastewater
- Drinking Water
- Transportation
- Utilities
- Hazardous Waste
- Etc

- Background
- Description of Extent of Exposure
- Maps
- Description of Impacts
- Potential Adaptation Strategies
- Regs, Policies and Programs

Draft Schedule

- March – May
  - ✓ Continue Impact Assessments in workgroups
- May - July
  - ✓ Learn about, identify and assess basic adaptation strategies
- Early Fall
  - ✓ Adaptation Workshop
- Oct – Dec
  - ✓ Prioritize options and draft final documents

DCP refines information and fills information gaps

UD CADSR obtains and analyzes socio-economic data

Workgroups may continue to meet as needed

February Workgroup Recap

- Answered the question “what resources/assets/infrastructure is my organization concerned could be at risk from sea level rise?”
  - ***Outcome – list of items of concern***

- Developed list of data and subject matter experts who could be consulted for priority items
  - ***Outcome – list of datasets and people to consult to begin exposure assessment***

Compiling Workgroup Data

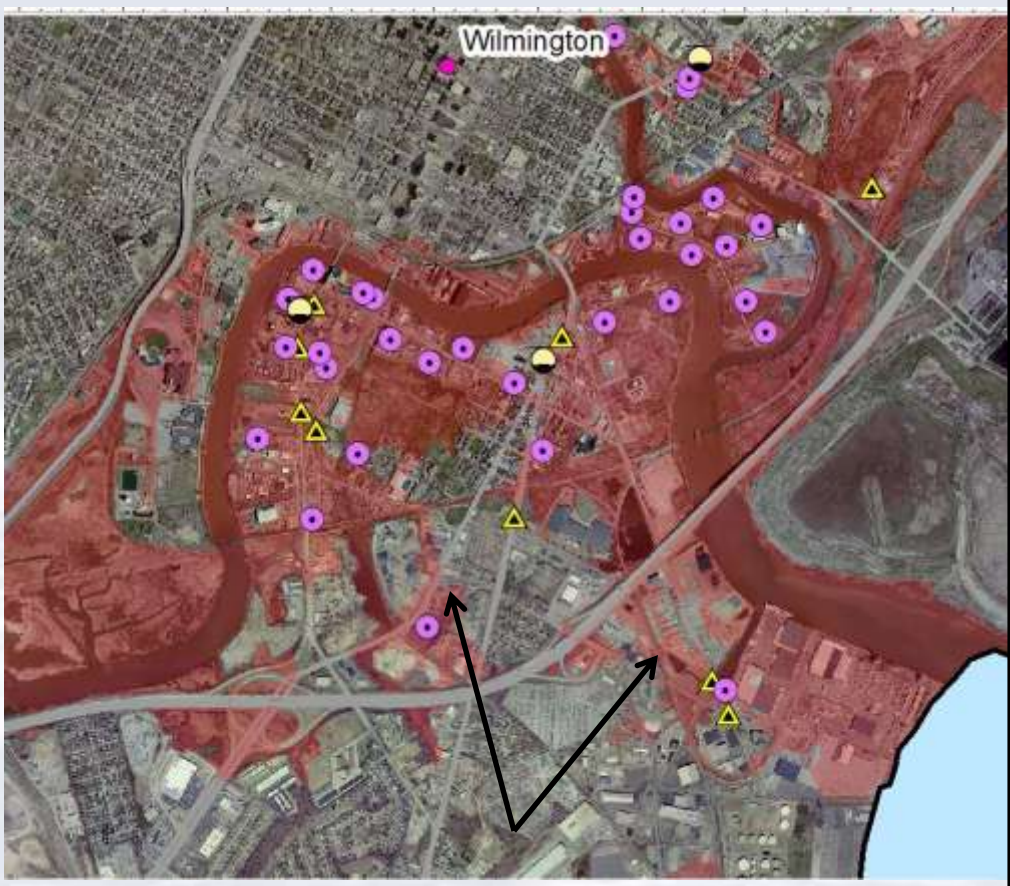
Asset Inventory Complete	Layer	Infra-structure Group	Society and Economy	Natural Resources
1	Schools (K-16)	X		
1	Fire and Rescue stations	X	X	
0	Police stations	X	X	
1	Communication/cell towers	X	X	
0	Telephone switching stations	X		
0	Roads	X	X	
0	Bridges	X	X	
0	Bus Routes	X		
0	Airports	X		
0	Railroads - Stations/Lines/Holding areas	X		
0	Ports and Ferry Terminals	X	X	
1	sewer pump stations	X	X	X
1	sewer lines	X	X	X
1	sewer treatment facilities (WWTP)	X	X	X
0	CSOs	X		
0	spray irrigation fields	X		
0	community treatment facilities	X		
0	public drinking water wells	X	X	
0	Electric generation/distribution	X		
1	Hospitals and medical facilities	X	X	
1	Emergency Operation Centers	X	X	
0	Emergency Shelters	X		
1	Evacuation Routes	X		
0	Pipelines	X		

DCP compiled data requests from each group into one document and began to collect data and analyze data using GIS

	Total Data Layers	142
	Data Layers Collected	57
1	Data Layers Analyzed	40
	Data Layers Pending	17
	Data Layers Not Collected	42
	Larger research needed	24

Determining Exposure

- Available GIS layers were clipped to the SLR Scenarios
- Limited time for analysis
  - ✓ 40 of 57 collected GIS layers analyzed
  - ✓ Many more GIS layers to be obtained
- Analysis will continue in March/April with existing data sets



Potential Exposure of Hazardous Sites at 1.5 meters of Sea Level Rise

Results

Waste Water Treatment Plants							
County	Total Number				Percent of Total Inundated		
		0.50m	1.0m	1.5m	0.50m	1.0m	1.5m
State	31	**0**	**2**	**4**	**0.00%**	**6.45%**	**12.90%**
New Castle	9	**0**	**1**	**2**	**0.00%**	**11.11%**	**22.22%**
Kent	7	**0**	**0**	**0**	**0.00%**	**0.00%**	**0.00%**
Sussex	15	**0**	**1**	**2**	**0.00%**	**6.67%**	**13.33%**
Sewer Pumping Stations							
County	Total Number				Percent of Total Inundated		
		0.50m	1.0m	1.5m	0.50m	1.0m	1.5m
State	648	**44**	**111**	**136**	**6.79%**	**17.13%**	**20.99%**
New Castle	156	**3**	**8**	**10**	**1.92%**	**5.13%**	**6.41%**
Kent	176	**1**	**5**	**9**	**0.57%**	**2.84%**	**5.11%**
Sussex	316	**40**	**98**	**117**	**12.66%**	**31.01%**	**37.03%**

Today's Workgroup Charge

- Review Status of Requested Data
  - ✓ Provide clarifications
- Document impacts for each resource
  - ✓ Functionality at different levels of inundation
  - ✓ Socio-Economic-Environmental impacts
- Document data caveats and additional data needs

Next Steps

- DCP will continue to collect and refine data
- Workgroup Meetings in April
  - ✓ Review any new data
  - ✓ Finish preliminary impact assessments
- May
  - ✓ Compiled assessments ready for review
  - ✓ Begin adaptation assessments

Workgroup Locations

- Economy and Society
  - ✓ Barn Room A
- Public Safety and Infrastructure
  - ✓ Barn Room B
- Natural Resources
  - ✓ DNERR Classroom

Workgroup Assignments listed in your packet